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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,858	03/30/2001	David W. Cannell	05725.0844-00	3869

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EXAMINER

FUBARA, BLESSING M

ART UNIT PAPER NUMBER

1615

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,858

Applicant(s)

CANNELL ET AL

Examiner

Blessing M. Fubara

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 21-23, 27, 28, 30, 32, 34, 36 and 49-150 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-20, 24-26, 29, 31, 33, 35, 37-48, 151 and 152 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Examiner acknowledges receipt of request for continued examination under 37 CFR 1.114, request for extension of time and remarks and amendment, all filed 12/17/03. Claims 1-152 are pending. Claims 10-12, 21-23, 27, 28, 30, 32, 34 and 48-150 are withdrawn from consideration.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 12/17/03 has been entered.

Claim Rejections - 35 USC § 112

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The use of derivative(s) continues to be objected to. The rejection is not repeated but the relevant points are raised below:

- a) Claim 6 recites "derivatives of polysaccharide polymers."
- b) Claim 7 recites "cationic starch derivatives" and "cationic guar gum derivatives."
- c) Claim 31 recites "derivatives of C₅ to C₇ saccharide units."

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The specification fails to describe what these derivatives are. Applicants may amend the specification to use a language that says that --- derivatives of polysaccharide polymers are.... The same goes for b) and c). The language of --such as--- and for example does not specifically convey what derivatives are applicable in the invention. Applicants may also overcome this rejection by reciting the derivatives using a Markush type format.

Claims 6-9, 31 and 33 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 7 and 31 recite "derivatives" with out reciting what these derivatives are. Applicants may overcome this rejection by reciting what the derivatives are with a Markush language.

The dictionary does not define "derivatives of polysaccharide polymers" or "cationic starch derivatives" or "cationic gum derivatives or derivatives of C₅ to C₇ saccharide units." The disclosure does not say that "cationic starch derivatives" are or by "cationic starch derivatives" we mean. The disclosure does not say that "derivatives of polysaccharide polymers" are or by "derivatives of polysaccharide polymers" we mean.... The disclosure does not say that "cationic gum derivatives" or "derivatives of C₅ to C₇ saccharide units" or by "cationic gum derivatives" or "derivatives of C₅ to C₇ saccharide units" we mean.... One of skill in the art or one of ordinary skill in the art is expected to experiment with all known and yet to be discovered derivatives of polysaccharide polymers, cationic gum derivatives or derivatives of C₅ to C₇ saccharide units or cationic starch derivatives and identify the derivatives that would work in applicants' invention. The disclosure does not give directions as to what derivatives of

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polysaccharide polymers, cationic starch derivatives, cationic gum derivatives and derivatives of C₅ to C₇ saccharide units that would work in applicants' invention. It is respectfully submitted that the issue is not with the derivatives per se but with derivatives as it defines polysaccharide polymers "derivatives of C₅ to C₇ saccharide units" or "cationic starch derivatives." What saccharides disclosed in the specification are cationic gum and cationic starch?

The claims do not define what those derivatives are. This statement does not mean literal definition of the term given in the dictionary as provided by applicants. What are the derivatives of derivatives of polysaccharide polymers, cationic gum, C₅ to C₇ saccharide units and cationic starch?

The question is:

1) What derivatives disclosed in the specification qualify as derivatives of polysaccharide polymers and which of the many derivatives of polysaccharide polymers are applicable in the instant invention?

2) What derivatives disclosed in the specification qualify as cationic starch derivatives and which of the many cationic starch derivatives polymers are applicable in the instant invention?

3) What derivatives disclosed in the specification qualify as derivatives of C₅ to C₇ saccharide units and which of the many derivatives of C₅ to C₇ saccharide units are applicable in the instant invention?

Applicants are respectfully requested to consider either using a Markush language to claim any disclosed "derivatives of polysaccharide polymers", "cationic gum derivatives" or "derivatives of C₅ to C₇ saccharide units" or amend the specification to say "derivatives of

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polysaccharide polymers” are A, B, C The same may be done with “cationic gum derivatives” or “derivatives of C₅ to C₇ saccharide units.”

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-9, 16, 17, 19, 20, 24-26, 29, 31, 33, 35, 45, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Gruber (US 5,597,811).

Gruber teaches a composition comprising water-soluble polyglucosamine derivatives (abstract and column 2, lines 17-27). In the background, Gruber discloses that polyglucosamines are polysaccharides that have glucose monomer units having amine groups and examples are chitin, chitosan and polyglucosaminoglycans (column 1, lines 13-24). One preferred end use for Gruber's composition is in personal care compositions formulated as skin creams, lotions, cleansing products, conditioners, hairsprays, mousses and gels (column 7, lines 62-66). The personal care compositions also include personal care ingredients such as vitamins, oils, alcohols, glycerine, sorbitol, fragrances, preservatives and surfactants (column 8, lines 1-14). Gruber further teaches that typical cleaning compositions contain surfactants (column 8, lines 28-36), typical aerosol and non-aerosol compositions contains low molecular weight alcohol, methacrylate copolymer, dimethicone copolyol and aminomethyl propanol (column 8, lines 37-43), typical creams contain mineral oil, water, methyl glucose sesquistearate, isopropyl palmitate and carbomer stabilizer (column 8, lines 44-49), typical mousses contain surfactant,

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isopropyl palmitate and polyquaternium-10 or poly(vinylmethacrylate)/methacrylate copolymer (column 8, lines 50-54) and a typical gel contains the ingredients listed in column 8, lines 55-59).

In the broadest sense, polyglucosamine has many glucosamine units, and regarding instant claim 1, effective amount is any amount of the composition, and future intended use is not critical in a composition claim and the comprising language of the instant claims allows for the presence or incorporation of other ingredients.

The broad scope of the claims is encompassed in Gruber and Gruber thus meets the limitations of the claims. Claim 1 does not recite glucosamine or polyquaternium 10. Applicants are relying on limitations not recited in the claims. Polyglucosamine is a polysaccharide and is a derivative of glucosamine.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-9, 13-20, 24-26, 29, 31, 35 and 37-48 rejected under 35 U.S.C. 103(a) as being unpatentable over Dunlop et al. (US 2002/0102228) in view of Gruber (US 5,597,811) and further in view of Yoshihara et al. (US 5,332,581).

Dunlop discloses anti-dandruff conditioning shampoo compositions and said compositions comprise anionic surfactants, conditioning agents, anti-dandruff agents, cationic polymers and water (abstract and section [0015] and [0022]). Zwitterionic surfactant is one of the surfactants in the anti-dandruff conditioning shampoo ([0025]). Silicone oils and cationic

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silicones are few examples of conditioning agents in the anti-dandruff conditioning shampoo of Dunlop ([0046] and [0049]). A soluble anti-dandruff agent in Dunlop is ketoconazole ([0018]). Cationic polymers in the anti-dandruff conditioning shampoo of Dunlop are cationic polysaccharides and one of the cationic polysaccharide listed in glucosamine amine sugar ([0127-0144]). Dunlop states that mixtures of cationic polysaccharides can be used and polyquaternium 10 is preferred cationic celluloses ([0144 and 0148]).

Optional components in Dunlop are additional surfactants, where the surfactant is based on quaternary ammonium moiety having counter ions selected from halogens, acetate, citrate, lactate, glycolate, phosphate nitrate, sulfate and alkyl sulfate radicals ([0178 and 0179]), suspending agents such as xanthan gum ([0189]), polyalkylene glycols ([0173]), hair growth regulating agents such as vitamins ([0213]), and other optional agents such as anti-static agents are incorporated into the anti-dandruff conditioning shampoo ([0218]).

Dunlop discloses a composition that encompasses most aspects of the claimed invention except that Dunlop is silent as it relates to the heat activation step of claim 48.

But Yoshihara et al. (US 5,332,581) discloses hair treatment composition anionic surfactants, one or more cationic polymers selected from cationic starch, cationized guar gum derivatives, diallyl quaternary ammonium salt/acrylamide copolymers, silicone derivatives, and dyes (columns 3 and 4, column 5, lines 1-26). Yoshihara teaches that it is desirable that the composition is applied to the hair, heated at 30-50 °C for 10-35 minutes and then washed away to further achieve improved effects (column 5, lines 52-57).

Yoshihara is thus relied upon for the heat activation step of claim 28 and Gruber is relied upon for disclosing a composition that comprises glucosamine and polyquaternium-10.

As it relates to claims 14, 15, 43 and 44, amounts of quaternary ammonium groups represents optimization of the composition and “[w]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum workable ranges by routine experimentation.

As it relates to a composition comprising glucosamine and polyquaternium-10, Dunlop suggests that mixtures of cationic polysaccharides can be used and one of the preferred cationic celluloses is polyquaternium 10 ([0144 and 0148]) while listing glucosamine amine sugar as a cationic polysaccharide. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the anti-dandruff conditioning shampoo of Dunlop where the composition comprises both glucosamine amine sugar and polyquaternium-10 since Gruber teaches hair composition that comprises both quaternary ammonium compounds. One having ordinary skill in the art would have been motivated to apply the conditioning shampoo of Dunlop to hair and heat at 30-50 °C for 10-35 minutes because Yoshihara teaches heat activation step.

The broad scope of the claims is encompassed in Gruber and Gruber thus meets the limitations of the claims. Claim 1 does not recite glucosamine or polyquaternium 10. Applicants are relying on limitations not recited in the claims. Polyglucosamine is a polysaccharide and is a derivative of glucosamine.

7. Claims 151 and 152 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunlop et al. (US 2002/0102228) in view of Rath et al. (US 5,993,792).

Dunlop clearly teaches hair conditioning shampoo composition comprising anionic surfactants, conditioning agents, anti-dandruff agents, cationic polymers and water. However,

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Dunlop fails to teach how the product is packaged. It is known in the art that hair products are packaged as kits. Specifically, Rath discloses packing hair products as kits (column 1, line 12 and column 13, lines 21-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to package the hair product of Dunlop because it is known in the art and Rath teaches packaging hair products as kits.

Shampoo base and shampoo are all shampoo related and packaged shampoo products as kits are known in the art.

8. Claims 14, 15, 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber (US 5,597,811) in view of applicants admitted prior art.

Gruber clearly teaches hair care composition comprising polyglucosamine derivatives, surfactant, isopropyl palmitate and polyquaternium-10 or poly(vinylmethacrylate)/methacrylate copolymer but fails to teach that the composition may comprise at least one additional sugar. But applicants on page 3, lines 5-15 of the specification admit that sugars and sugar derivatives are added to hair care compositions and specifically that sugars improve the tactile and elastic properties of natural hairs and helps the hair to retain moisture. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include sugars to the composition of Gruber because adding sugars to the hair composition of Gruber would improve the tactile and elastic properties of the hair and also help the hair to retain moisture according to applicants' admitted prior art.

As it regard to claims 14, 15, 43 and 44, amounts of quaternary ammonium groups represents optimization of the composition and "[w]here the general conditions of a claim are

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disclosed in the prior art, it is not inventive to discover the optimum workable ranges by routine experimentation.

The combination of Gruber and applicants' admitted prior art is proper because Gruber discloses polysaccharides and the proviso recited in the amended claim does not overcome the rejection.

Other Matters: Applicants indicate in the remarks that claims 1-9, 13-20, 24-26, 29, 31, 33, 35, 37-48, 151 and 151 are pending. If applicants want to cancel non-elected claims that are withdrawn from consideration, applicants may properly cancel those claims by amendment

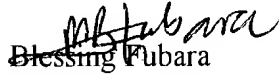
9. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 242-0594. The examiner can normally be reached on 7 a.m. to 3:30 p.m. (Monday to Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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